

[The device of claim 5,] wherein said hole is back filled with an optical quality material.

REMARKS

The specification has been amended to set forth the prior application upon which priority is based under 35 U.S.C. 120.

Claim 1 has been amended to remove the objection thereto and to more clearly define the invention and allowable claim 6 has been rewritten in independent form. Claims 1 to 25 remain active in this application.

With reference to the objection to the drawings, it is respectfully submitted that no drawing correction is required and that claim 6 can be read on the drawings as now presented. As stated at page 15, second full paragraph, "At this point, as an aid to optical communications, a hole 47 may be formed through at least layer 46 with a laser beam or other similar means, directly above an optical receiver and/or transmitter on the surface of semiconductor device 16. If necessary, the hole may be lengthened through one or more of layers 38, 36, 26 and 24, down to the surface of an optical receiver and/or transmitter on the surface of semiconductor device 16, as shown in Figure 23. The hole may be left open or back filled with a photo optical quality material." It is therefore apparent that the hole 47 which is shown, for example, in Fig. 26, can be viewed as having an optical quality material therein as depicted in the drawing. Accordingly, no drawing correction is required.

A new Abstract of the Disclosure is attached hereto as a separate page.

Claim 1 has been amended to overcome the objection thereto.

Claims 1, 23 and 24 were rejected under 35 U.S.C. 102(b) as being anticipated by Maruyama et al. (U.S. 4,199,777). The rejection is respectfully traversed.

Claim 1 requires, among other features, "a thin film overlay electrically connecting bond pads on said semiconductor device to electrically conductive pads on a layer of said thin film overlay facing away from said semiconductor device". No such structure is taught or even remotely suggested by Maruyama et al. either alone or in the combination as claimed. Note that the claim requires that the thin film overlay provide the electrical connection between the bond pads on the semiconductor device to electrically conductive pads on the thin film overlay. Maruyama et al. has no such structure. In Fig. 2 of Maruyama et al. the terminal 4 extends through the silicon dioxide layer 6 with the silicon dioxide layer making no electrical connection as required by claim 1. The same reasoning is applied to Figs. 4 and 6 of Maruyama et al. since the layers 12 and 24 are merely of a different material.

Claims 23 and 24 depend from claim 1 and therefore define patentably over Maruyama et al. for at least the reasons presented above with reference to claim 1.

In addition, claim 23 further limits claim 1 by requiring at least one additional semiconductor device in the package. No such combination is taught or suggested by Maruyama et al.

Claim 24 further limits claim 23 by requiring that the thin film overlay connect bond pads on the semiconductor devices to electrically conductive pads on a layer of the thin film overlay facing away from the semiconductor device. No such combination is taught or suggested by Maruyama et al.

Claims 1, 5, 8 to 17 and 21 to 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Marcinkiewicz et al. (U.S. 5,422, 513). The rejection is respectfully traversed.

As demonstrated by the Declaration of Ronald O. Neerings, Esq., the attorney who initially prepared this application, the invention as described and claimed herein was conceived with due diligence from a date prior to the filing date of Marcinkiewicz et al. up to the filing date of the subject application. Accordingly, Marcinkiewicz et al. is not available as a reference in this application.

Claims 2, 3 and 18 to 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Marcinkiewicz et al. in view of Nakabu et al (U.S. 4,544,989). The rejection is respectfully traversed for the reason stated above as to Marcinkiewicz et al.

Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Marcinkiewicz et al. in view of Eichelberger (U.S. 5,144,747). The rejection is respectfully traversed for the reason stated above as to Marcinkiewicz et al.

Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over Marcinkiewicz et al. in view of Cole et al. (U.S. 5,338,975). The rejection is respectfully traversed for the reason stated above as to Marcinkiewicz et al.

In view of the above remarks, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,



Jay M. Cantor
Reg. No. 19906
(202) 639-7713

1. A device comprising:

a package having a cavity therein;

a semiconductor device in said cavity, said semiconductor device having at least one optical receiver and/or transmitter adjacent a surface of said semiconductor device facing away from said package; and

a thin film overlay electrically connecting bond pads on said semiconductor device to electrically conductive pads on a layer of said thin film overlay facing away from said semiconductor device.

6. A device comprising:

a package having a cavity therein;

a semiconductor device in said cavity, said semiconductor device having at least one optical receiver and/or transmitter adjacent a surface of said semiconductor device facing away from said package; and

a thin film overlay electrically connecting bond pads on said semiconductor device to electrically conductive pads on a layer of said thin film overlay facing away from said semiconductor device;

wherein said thin film overlay includes a hole between said optical receiver and/or transmitter on said semiconductor device and said layer of said thin film overlay facing away from said semiconductor device;

wherein said hole is back filled with an optical quality material.